Martin Milanič, Curriculum Vitae (August 2024)

PERSONAL INFORMATION

Nationality: Slovene

CONTACT INFORMATION

University of Primorska
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EDUCATION

Rutgers University, New Jersey, USA May 2007

· PhD in Operations Research, under the supervision of Prof. Vadim V. Lozin
Algorithmic Developments and Complexity Results for Finding Maximum and Exact Independent Sets in Graphs

University of Ljubljana, Slovenia July 2003

· BSc (Diploma) in Mathematics

CURRENT POSITIONS

Professor May 2019 – present

· University of Primorska (Koper, Slovenia),
UP FAMNIT (Faculty of Mathematics, Natural Sciences and Information Technologies)

Research Counsellor May 2019 – present

· University of Primorska (Koper, Slovenia),
UP IAM (Andrej Marušič Institute)

PREVIOUS POSITIONS

Associate Professor March 2014 – April 2019

· University of Primorska (Koper, Slovenia),
UP FAMNIT (Faculty of Mathematics, Natural Sciences and Information Technologies)

Senior Research Fellow March 2014 – April 2019

· University of Primorska (Koper, Slovenia),
UP IAM (Andrej Marušič Institute)

Research Fellow November 2013 – December 2014

· Institute for Mathematics, Physics, and Mechanics (Ljubljana, Slovenia)

Assistant Professor April 2009 – March 2014

· University of Primorska (Koper, Slovenia),
UP FAMNIT (Faculty of Mathematics, Natural Sciences and Information Technologies)

Research Fellow April 2009 – March 2014

· University of Primorska (Koper, Slovenia),
UP IAM (Andrej Marušič Institute) [until 2011: UP PINT]

Postdoctoral Researcher July 2007 – February 2009

· Bielefeld University, Faculty of Technology (within the junior research group Combinatorial Search Algorithms in Bioinformatics at AG Genome Informatics)

VISITING PROFESSOR

Osaka Prefecture University (Sakai, Japan), November 2018 – February 2019 (3 months)

LAMSADE, Université Paris–Dauphine (Paris, France) July 2018 (1 month)

University of Maribor (Maribor, Slovenia) May 2016 – June 2016

LAMSADE, Université Paris–Dauphine (Paris, France) May 2014 – June 2014 (1 month)

INSTITUTIONAL RESPONSIBILITIES

The following is all at the University of Primorska:

· 2012 – present: Member of the faculty Committee for Study and Student Affairs, UP FAMNIT

· 2011 – present: Member of the faculty Senate, UP FAMNIT

· 2012 – 2016: Vice Dean for Education, UP FAMNIT

· 2012 – 2016: Member of the University Committee for Study Affairs, UP

· 2011 – 2015: Member of the Committee for Habilitations, UP FAMNIT and UP IAM

· 2010 – 2012: Coordinator of the BS study program "Bioinformatics", UP FAMNIT

· 2009 – 2011: Member of the institute Scientific Council, UP PINT

RESEARCH INTERESTS

Discrete Mathematics, with emphasis on Graph Theory and Hypergraphs including: structural and algorithmic graph theory, graph width parameters, structure and characterizations of graphs in hereditary classes, study of graph classes related to cliques and independent sets, applications of hypergraphs to graph theory, applications of graph theory and combinatorial optimization to other areas (for example, computational biology). I have also done some work in the design and analysis of competitive algorithms for evaluation of Boolean functions and game trees.

AWARDS AND HONORS

· Zois Recognition for important achievements in scientific research work in the field of discrete mathematics, 2017. *(Zois Awards and Recognitions are the most prestigious awards for exceptional achievements in scientific research and development activities, awarded to researchers in the Republic of Slovenia.)*

· Fields Institute travel grant, 2017.

· University of Primorska Award for Excellence in Research in the Natural Sciences for 2015, Koper, Slovenia, 2016.

· Named "excellent reviewer" for the SCI journal Discrete Applied Mathematics, December 2015.

· Award given by the *Scientific Excellence Fund of the University of Primorska* for research and development achievements for 2011, Koper, Slovenia, 2012.

· *Excellence Fellowship*, awarded by Rutgers University, New Brunswick, NJ, September 2003–June 2006.

· Student Prešeren award for outstanding diploma thesis, November 2003.

· Zois scholarship for exceptionally talented students, September 1994–September 2005.

· Third prize at the "9th International Mathematics Competition for University Students, Warsaw, Poland, July 19–July 25 2002."

· Member of the Slovenian national team at the 39th International Mathematical Olympiad, Taipei, Taiwan, 1998.

· Honorable mention as a member of the Slovenian national team at the 38th International Mathematical Olympiad, Mar del Plata, Argentina, 1997.

BOOK

· M. Milanič, B. Servatius, H. Servatius, *Discrete Mathematics With Logic*, Academic Press, 2024.

BOOK CHAPTERS

· M. Milanič, *Strong Cliques and Stable Sets*, in: Topics in Algorithmic Graph Theory, Edited by Lowell W. Beineke, Martin C. Golumbic, and Robin J. Wilson, Cambdridge University Press, May 2021, pp. 207–227.

· M. Milanič, J. Monnot, *The Complexity of the Exact Weighted Independent Set Problem*, Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives, 30th Anniversary of the LAMSADE. Edited by Vangelis Th. Paschos, Wiley-ISTE, January 2008.

JOURNAL PUBLICATIONS

92. M. Ahanjideh, M. Milanič, M. Servatius, *On balanceable and simply balanceable regular graphs*, European Journal of Combinatorics, accepted.
91. C. Dallard, M. Milanič, K. Štorgel, *Treewidth versus clique number. III. Tree-independence number of graphs with a forbidden structure*, Journal of Combinatorial Theory, Series B, 167 (2024) 338–391.
90. C. Dallard, R. Ganian, M. Hatzel, M. Krnc, M. Milanič, *Graphs with at most two moplexes*, Journal of Graph Theory 107 (2024) 38–69.
89. M. Milanič, I. Penev, N. Pivač, K. Vušković, *Bisimplicial separators*, Journal of Graph Theory 106 (2024) 816–842.
88. C. Dallard, V. Lozin, M. Milanič, K. Štorgel, V. Zamaraev, *Functionality of box intersection graphs*, Results in Mathematics 79 (2024) 48.
87. C. Dallard, M. Milanič, K. Štorgel, *Treewidth versus clique number. II. Tree-independence number*, Journal of Combinatorial Theory, Series B, 164 (2024) 404–442.
86. M. Milanič, N. Pivač, *Computing Well-Covered Vector Spaces of Graphs using Modular Decomposition*, Computational and Applied Mathematics 42 (2023) Article number: 360.
85. N. Chiarelli, M. Krnc, M. Milanič, U. Pferschy, J. Schauer, *Fair allocation algorithms for indivisible items under structured conflict constraints*, Computational and Applied Mathematics 42 (2023) Article number: 302.
84. N. Chiarelli, M. Krnc, M. Milanič, U. Pferschy, N. Pivač, J. Schauer, *Fair allocation of indivisible items with conflict graphs*, Algorithmica 85 (2023) 1459–1489.
83. N. Chiarelli, C. Dallard, A. Darmann, S. Lendl, M. Milanič, P. Muršič, U. Pferschy, N. Pivač, *Allocation of Indivisible Items with Individual Preference Graphs*, Discrete Applied Mathematics 334 (2023) 45–62.
82. V. Gurvich, M. Krnc, M. Milanič, M. Vyalyi, *Shifting paths to avoidable ones*, Journal of Graph Theory 100 (2022) 69–83.
81. J. Beisegel, M. Chudnovsky, V. Gurvich, M. Milanič, M. Servatius, *Avoidable vertices and edges in graphs: Existence, characterization, and applications*, Discrete Applied Mathematics 309 (2022) 285–300.
80. E. J. Kim, J. Monnot, M. Milanič, C. Picouleau, *Complexity and algorithms for constant diameter augmentation problems*, Theoretical Computer Science 904 (2022) 15–26. (Part of special issue Combinatorial Optimization and Related Topics – In Memory of Jérôme Monnot.)

79. C. Dallard, M. Milanič, K. Štorgel, *Treewidth versus clique number. I. Graph classes with a forbidden structure*, SIAM Journal on Discrete Mathematics 35 (2021) 2618–2646.

78. R. Darda, M. Milanič, M. A. Pizaña, *Searching for square-complementary graphs: complexity of recognition and further non-existence results*, Discrete Mathematics 344 (2021) 112369.

77. M. Milanič, N. Pivač, *Polynomially bounding the number of minimal separators in graphs: reductions, sufficient conditions, and a dichotomy theorem*, The Electronic Journal of Combinatorics 28 (2021), no. 1, Paper No. 1.41, 27 pp.

76. N. Chiarelli, B. Martínez-Barona, M. Milanič, J. Monnot, P. Muršič, *Strong cliques in diamond-free graphs*, Theoretical Computer Science 858 (2021) 49–63. (Part of special issue Combinatorial Optimization and Related Topics – In Memory of Jérôme Monnot.)

75. T. Ekim, D. Gözüpek, A. Hujdurović, M. Milanič, *Mind the independence gap*, Discrete Mathematics 343 (2020) 111943.

74. E. Boros, V. Gurvich, M. Milanič, *Characterizing and decomposing classes of threshold, split, and bipartite graphs via 1-Sperner hypergraphs*, Journal of Graph Theory 94 (2020) 364–397.

73. R. Chikhi, V. Jovičić, S. Kratsch, P. Medvedev, M. Milanič, S. Raskhodnikova, N. Varma, *Bipartite graphs of small readability*, Theoretical Computer Science 806 (2020) 402–415.

72. E. Boros, V. Gurvich, M. Milanič, *Decomposing 1-Sperner hypergraphs*, The Electronic Journal of Combinatorics 26 (2019), #P3.18.

71. N. Chiarelli, T. R. Hartinger, V. A. Leoni, M. I. Lopez Pujato, M. Milanič, *New algorithms for weighted k-domination and total k-domination problems in proper interval graphs*, Theoretical Computer Science 795 (2019) 128–141.

70. A. Hujdurović, M. Milanič, B. Ries, *Detecting strong cliques*, Discrete Mathematics 342 (2019) 2738–2750.

69. L. Martínez, M. Milanič, I. Malaina, C. Álvarez, M.-B. Pérez, I. M. de la Fuente, *Weighted lambda superstrings applied to vaccine design*, PLOS One 14(2): e0211714, 2019.

68. N. Chiarelli, M. Milanič, *Linear separation of connected dominating sets in graphs*, Ars Mathematica Contemporanea 16 (2019) 487–525.

67. A. Brandstädt, M. Milanič. *A Dichotomy for Weighted Efficient Dominating Sets with Bounded Degree Vertices*. Information Processing Letters 142 (2019) 30–34.

66. E. Husić, X. Li, A. Hujdurović, M. Mehine, R. Rizzi, V. Mäkinen, M. Milanič, A. I. Tomescu. *MIPUP: Minimum perfect unmixed phylogenies for multi-sampled tumors via branchings and ILP*. Bioinformatics 2019 (35) 769–777.

65. T. Ekim, D. Gözüpek, A. Hujdurović, M. Milanič, *On almost well-covered graphs of girth at least 6*. Discrete Mathematics and Theoretical Computer Science 20:2 (2018) Paper No. 17.

64. A. Brandstädt, V. Giakoumakis, M. Milanič. *Weighted efficient domination for some classes of H-free and of (H_1, H_2)-free graphs*. Discrete Applied Mathematics 250 (2018) 130–144.

63. E. Boros, V. Gurvich, M. Milanič, V. Oudalov, J. Vičič. *A three-person deterministic graphical game without Nash equilibria*. Discrete Applied Mathematics 243 (2018) 21–38.

62. A. Hujdurović, M. Milanič, B. Ries. *Graphs vertex-partitionable into strong cliques*. Discrete Mathematics 341 (2018) 1392–1405.

61. A. Hujdurović, E. Husić, M. Milanič, R. Rizzi, A. I. Tomescu, *Perfect phylogenies via branchings in acyclic digraphs and a generalization of Dilworth's theorem*. ACM Transactions on Algorithms 14 (2018) Art. 20, 26 pp.

60. B. Brešar, T. R. Hartinger, T. Kos, M. Milanič. 1-*perfectly orientable K_4-minor-free and outerplanar graphs*. Discrete Applied Mathematics 248 (2018) 33–45.

59. B. Brešar, T. R. Hartinger, T. Kos, M. Milanič, *On total domination in the Cartesian product of graphs*. Discussiones Mathematicae Graph Theory 38 (2018) 963–976.

58. N. Chiarelli, T. R. Hartinger, M. Johnson, M. Milanič, D. Paulusma, *Minimum Connected Transversals in Graphs: New Hardness Results and Tractable Cases Using the Price of Connectivity*. Theoretical Computer Science 705 (2018) 75–83.

57. F. Bonomo, B. Brešar, L. N. Grippo, M. Milanič, M. D. Safe, *Domination parameters with number 2: interrelations and algorithmic consequences*. Discrete Applied Mathematics 235 (2018) 23–50.

56. M. Milanič, I. Penev, N. Trotignon, *Stable sets in $\{$wheel, ISK4$\}$-free graphs*. Algorithmica 80 (2018) 415–447.

55. A. Hujdurović, U. Kačar, M. Milanič, B. Ries, A. I. Tomescu, *Complexity and algorithms for finding a perfect phylogeny from mixed tumor samples*, IEEE Transactions on Computational Biology and Bioinformatics 15 (2018) 96–108.

54. Z. Deniz, T. Ekim, T. R. Hartinger, M. Milanič, M. Shalom, *On two extensions of equimatchable graphs.* Discrete Optimization 26 (2017) 112–130.

53. D. Gözüpek, A. Hujdurović, M. Milanič, *Characterizations of minimal dominating sets and the well-dominated property in lexicographic product graphs*. Discrete Mathematics and Theoretical Computer Science 19 (2017) Paper No. 25, 17 pp.

52. S. Kratsch, M. Milanič, *On the complexity of the identifiable subgraph problem, revisited*. Discrete Applied Mathematics 226 (2017) 78–86.

51. M. Milanič, T. R. Hartinger, 1-*perfectly orientable graphs and graph products*, Discrete Mathematics 340 (2017) 1727–1737.

50. E. Boros, V. Gurvich, M. Milanič, *On equistable, split, CIS, and related classes of graphs.* Discrete Applied Mathematics 216P1 (2017) 47–66.

49. T. R. Hartinger, M. Milanič. *Partial characterizations of* 1-*perfectly orientable graphs*, Journal of Graph Theory 85 (2017) 378–394.

48. M. Milanič, N. Trotignon, *Equistarable graphs and counterexamples to three conjectures on equistable graphs*. Journal of Graph Theory 84 (2017) 536–551.

47. T. R. Hartinger, M. Johnson, M. Milanič, D. Paulusma, *The price of connectivity for cycle transversals*. European Journal of Combinatorics 58 (2016) 203–224.

46. R. Chikhi, P. Medvedev, M. Milanič, S. Raskhodnikova, *On the readability of overlap digraphs*. Discrete Applied Mathematics 205 (2016) 35–44.

45. L. Alcón, M. Gutierrez, I. Kovács, M. Milanič, R. Rizzi, *Strong cliques and equistability of EPT graphs.* Discrete Applied Mathematics 203 (2016) 13–25.

44. E. Boros, N. Chiarelli, M. Milanič, *Equistarable bipartite graphs.* Discrete Mathematics 339 (2016) 1960–1969.

43. F. Bonomo, L. N. Grippo, M. Milanič, M. D. Safe, *Graph classes with and without powers of power-bounded clique-width.* Discrete Applied Mathematics 199 (2016) 3–15.

42. F. Cicalese, M. Milanič, R. Rizzi, *On the complexity of the vector connectivity problem*. Theoretical Computer Science 591 (2015) 60–71.

41. N. Chiarelli, M. Milanič, *On a class of graphs between threshold and total domishold graphs*, Discrete Applied Mathematics 591 (2015) 60–71.

40. F. Cicalese, G. Cordasco, L. Gargano, M. Milanič, J. G. Peters, U. Vaccaro, *Spread of influence in weighted networks under time and budget constraints*, Theoretical Computer Science 586 (2015) 40–58.
39. A. Brandstädt, P. Fičur, A. Leitert, M. Milanič, *Polynomial-time algorithms for weighted efficient domination problems in AT-free graphs and dually chordal graphs*, Information Processing Letters 115 (2015) 256–262.
38. E. Dobson, A. Hujdurović, M. Milanič, G. Verret, *Vertex-transitive CIS graphs*, European Journal of Combinatorics 44 (2015) 87–98.
37. M. Kamiński, M. Milanič, *On the complexity of the identifiable subgraph problem*, Discrete Applied Mathematics 182 (2015) 25–33.
36. L. Martínez, M. Milanič, L. Legarreta, P. Medvedev, I. Malaina, I. M. De la Fuente, *A combinatorial approach to the design of vaccines*, Journal of Mathematical Biology 70 (2015) 1327–1358.
35. M. Anholcer, S. Cichacz, M. Milanič, *Group irregularity strength of connected graphs*, Journal of Combinatorial Optimization 30 (2015) 1–17.
34. N. Chiarelli, M. Milanič, *Total domishold graphs: a generalization of threshold graphs, with connections to threshold hypergraphs*, Discrete Applied Mathematics 179 (2014) 1–12.
33. B. Brešar, T. Gologranc, M. Milanič, D. Rall, R. Rizzi, *Dominating sequences in graphs*, Discrete Mathematics 336 (2014) 22–36.
32. E. Boros, P. Heggernes, P. van 't Hof, M. Milanič, *Vector connectivity in graphs*, Networks 63 (2014) 277–285.
31. M. Milanič, A. I. Tomescu, *Set graphs. IV. Further connections with claw-freeness*, Discrete Applied Mathematics 174 (2014) 113–121.
30. M. Milanič, R. Rizzi, A. I. Tomescu, *Set graphs. II. Complexity of set graph recognition and similar problems*, Theoretical Computer Science 547 (2014) 70–81.
29. M. Milanič, O. Schaudt, A. Oversberg, *A characterization of line graphs that are squares of graphs*, Discrete Applied Mathematics 173 (2014) 83–91.
28. M. Milanič, A. S. Pedersen, D. Pellicer, G. Verret, *Graphs whose complement and square are isomorphic*, Discrete Mathematics 327C (2014) 62–75.
27. F. Cicalese, G. Cordasco, L. Gargano, M. Milanič, U. Vaccaro, *Latency-bounded target set selection in social networks*, Theoretical Computer Science 535 (2014) 1–15.
26. E. Boros, V. Gurvich, M. Milanič, *On CIS circulants*, Discrete Mathematics 318 (2014) 78–95.
25. V. Lozin, M. Milanič, C. Purcell, *Graphs without large apples and the maximum weight independent set problem*, Graphs and Combinatorics 30 (2014) 395–410.
24. V. E. Levit, M. Milanič, *Equistable simplicial, very well-covered, and line graphs*, Discrete Applied Mathematics 165 (2014) 205–212.
23. M. Milanič, T. Pisanski, A. Žitnik, *Dilation coefficient, plane-width, and resolution coefficient of graphs*, Monatshefte für Mathematik 170 (2013) 179–193.
22. M. Milanič, *Hereditary efficiently dominatable graphs*, Journal of Graph Theory 73 (2013) 400–424.
21. V. V. Lozin, M. Milanič, *Critical properties of graphs of bounded clique-width*, Discrete Mathematics 313 (2013) 1035–1044.
20. M. Milanič, O. Schaudt, *Computing square roots of trivially perfect and threshold graphs*, Discrete Applied Mathematics 161 (2013) 1538–1545.

19. F. Cicalese, M. Milanič, U. Vaccaro, *On the approximability and exact algorithms for vector domination and related problems in graphs*, Discrete Applied Mathematics 161 (2013) 750–767.
18. M. Milanič, *A note on domination and independence-domination numbers in graphs*, Ars Mathematica Contemporanea 6 (2013) 89–97.
17. E. Fritzilas, M. Milanič, J. Monnot, Yasmin A. Ríos Solís, *Resilience and optimization of identifiable bipartite graphs*, Discrete Applied Mathematics 161 (2013) 593–603.
16. M. Milanič, A. I. Tomescu, *Set graphs. I. Hereditarily finite sets and extensional acyclic orientations*, Discrete Applied Mathematics 161 (2013) 677–690.
15. D. Stevanović, M. Milanič, *Improved inequality between Zagreb indices of trees*, MATCH Communications in Mathematical and in Computer Chemistry 168 (2012) 147–156.
14. M. Kamiński, P. Medvedev, M. Milanič, *Complexity of independent set reconfigurability problems*, Theoretical Computer Science 439 (2012) 9–15.
13. F. Cicalese, M. Milanič, *Graphs of separability at most 2*, Discrete Applied Mathematics 160 (2012) 685–696.
12. M. Kamiński, P. Medvedev, M. Milanič, *Shortest paths between shortest paths*, Theoretical Computer Science 412 (2011) 5205–5210.
11. Š. Miklavič, M. Milanič, *Equistable graphs, general partition graphs, triangle graphs, and graph products*, Discrete Applied Mathematics 159 (2011) 1148–1159.
10. F. Cicalese, T. Gagie, E. S. Laber, M. Milanič, *Competitive Boolean function evaluation: Beyond monotonicity, and the symmetric case*, Discrete Applied Mathematics 159 (2011) 1070–1078.
9. M. Milanič, J. Orlin, G. Rudolf, *Complexity results for equistable graphs and related classes*, Annals of Operations Research 188 (2011) 359–370.
8. M. Kamiński, P. Medvedev, M. Milanič, *The plane-width of graphs*, Journal of Graph Theory 68 (2011) 229–245.
7. F. Cicalese, M. Milanič, *Competitive evaluation of threshold functions in the priced information model*, Annals of Operations Research 188 (2011) 111–132.
6. V. Lozin, M. Milanič, *On the maximum independent set problem in subclasses of planar graphs*, Journal of Graph Algorithms and Applications 14 (2010) 269–286.
5. E. Fritzilas, M. Milanič, S. Rahmann, Y. A. Ríos Solís, *Structural identifiability in low-rank matrix factorization*, Algorithmica 56 (2010) 313–332.
4. B. Escoffier, M. Milanič, V. Paschos, *Simple and fast reoptimizations for the Steiner tree problem*, Algorithmic Operations Research 4 (2009) 86–94.
3. M. Kamiński, V. V. Lozin, M. Milanič, *Recent developments on graphs of bounded clique-width*, Discrete Applied Mathematics 157 (2009) 2747–2761.
2. V. V. Lozin, M. Milanič, *A polynomial algorithm to find an independent set of maximum weight in a fork-free graph*, Journal of Discrete Algorithms 6 (2008) 595–604.
1. V. V. Lozin, M. Milanič, *On finding augmenting graphs*, Discrete Applied Mathematics 156 (2008) 2517–2529.

REFEREED CONFERENCE PUBLICATIONS

48. P. T. Lima, M. Milanič, P. Muršič, K. Okrasa, P. Rzążewski, K. Štorgel, *Tree decompositions meet induced matchings: beyond Max Weight Independent Set*, to appear in the Proceedings of the 32nd Annual European Symposium on Algorithms (ESA 2024), Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2024).
47. C. Dallard, M. Dumas, C. Hilaire, M. Milanič, A. Perez, N. Trotignon, *Detecting $K_{2,3}$ as an induced minor*, Proceedings of the 35th International Workshop on Combinatorial Algorithms (IWOCA 2024), Lecture Notes in Computer Science 14764 (2024) 151–164.
46. C. Dallard, P. Golovach, F. Fomin, T. Korhonen, M. Milanič, *Computing tree decompositions with small independence number*, Proceedings of the 51st EATCS International Colloquium on Automata, Languages and Programming (ICALP 2024), Leibniz International Proceedings in Informatics (LIPIcs), Volume 297, pp. 51:1-51:18, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2024).
45. J. Beisegel, N. Chiarelli, E. Köhler, M. Milanič, P. Muršič, R. Scheffler, *The Simultaneous Interval Number: A New Width Parameter that Measures the Similarity to Interval Graphs*, Proceedings of the 19th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2024). Leibniz International Proceedings in Informatics (LIPIcs), Volume 294, pp. 7:1-7:20, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2024).
44. H. L. Bodlaender, É. Bonnet, L. Jaffke, D. Knop, P. T. Lima, M. Milanič, S. Ordyniak, S. Pandey, O. Suchý, *Treewidth is NP-Complete on Cubic Graphs*, Proceedings of the 18th International Symposium on Parameterized and Exact Computation (IPEC 2023), Leibniz International Proceedings in Informatics (LIPIcs). Volume 285, pp. 7:1-7:13, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2023).
43. M. Milanič, Y. Uno, *Upper clique transversals in graphs*, Proceedings of the 49th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2023), Lecture Notes in Computer Science 14093 (2023) 432–446.
42. F. Cicalese, C. Dallard, M. Milanič, *On constrained intersection representations of graphs and digraphs*, Proceedings of the 33rd International Symposium on Algorithms and Computation (ISAAC 2022), volume 248 of Leibniz International Proceedings in Informatics (LIPIcs), pages 38:1–38:15, Dagstuhl, Germany, 2022. Schloss Dagstuhl – Leibniz-Zentrum für Informatik.
41. N. Chiarelli, C. Dallard, A. Darmann, S. Lendl, M. Milanič, P. Muršič, U. Pferschy, N. Pivač, *Allocating Indivisible Items with Minimum Dissatisfaction on Preference Graphs*, Proceedings of the 7th International Conference on Algorithmic Decision Theory (ADT 2021), Lecture Notes in Computer Science (LNAI) 13023 (2021) 243–257.
40. C. Dallard, M. Krbezlija, M. Milanič, *Vertex Cover at Distance on H-free Graphs*, Proceedings of the 32nd International Workshop on Combinatorial Algorithms (IWOCA 2021), Lecture Notes in Computer Science 12757 (2021) 237–251.
39. C. Dallard, R. Ganian, M. Hatzel, M. Krnc, M. Milanič, *Graphs with two moplexes*, Proceedings of the XI Latin and American Algorithms, Graphs and Optimization Symposium (LAGOS 2021), Procedia Computer Science 195 (2021) 248–256.
38. J. Beisegel, N. Chiarelli, E. Köhler, M. Krnc, M. Milanič, N. Pivač, R. Scheffler, M. Strehler, *Edge elimination and weighted graph classes*, Proceedings of the 46th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2020), Lecture Notes in Computer Science 12301 (2020) 134–147.
37. N. Chiarelli, B. Martínez-Barona, M. Milanič, J. Monnot, P. Muršič, *Strong cliques in diamond-free graphs*, Proceedings of the 46th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2020), Lecture Notes in Computer Science 12301 (2020) 261–273.

36. C. Dallard, M. Milanič, K. Štorgel, *Treewidth versus clique number in graph classes with a forbidden structure*, Proceedings of the 46th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2020), Lecture Notes in Computer Science 12301 (2020) 92–105.

35. N. Chiarelli, M. Krnc, M. Milanič, U. Pferschy, N. Pivač, J. Schauer, *Fair packing of independent sets*, Proceedings of the 31st International Workshop on Combinatorial Algorithms (IWOCA 2020), Lecture Notes in Computer Science 12126 (2020) 154–165.

34. M. Milanič, N. Pivač, J. Vičič, *An ILP formulation for a variant of the university timetabling problem*, Middle-European Conference on Applied Theoretical Computer Science: proceedings of the 22nd International Multiconference Information Society - IS 2019, Ljubljana, Slovenia: volume I. Ljubljana: Institut "Jožef Stefan", 2019. p. 55–58.

33. E. Husić, M. Milanič, *A polynomial-time algorithm for the independent set problem in $\{P_{10}, C_4, C_6\}$-free graphs*, Proceedings of the 45th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2019), Lecture Notes in Computer Science 11789 (2019) 271–284.

32. M. Milanič, N. Pivač, *Minimal separators in graph classes defined by small forbidden induced subgraphs*, Proceedings of the 45th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2019), Lecture Notes in Computer Science 11789 (2019) 379-391.

31. J. Beisegel, M. Chudnovsky, V. Gurvich, M. Milanič, M. Servatius, *Avoidable vertices and edges in graphs*. Proceedings of the 16th Algorithms and Data Structures Symposium (WADS 2019), Lecture Notes in Computer Science 11646 (2019) 126–139.

30. L. Alcón, M. Gutierrez, M. Milanič, *A characterization of claw-free CIS graphs and new results on the order of CIS graphs*. Proceedings of the X Latin and American Algorithms, Graphs and Optimization Symposium (LAGOS 2019), Electronic Notes in Theoretical Computer Science 346 (2019) 15–27.

29. R. Chikhi, V. Jovičić, S. Kratsch, P. Medvedev, M. Milanič, S. Raskhodnikova, N. Varma, *Bipartite graphs of small readability*. Proceedings of the The 24th International Computing and Combinatorics Conference (COCOON 2018), Lecture Notes in Computer Science 10976 (2018) 467–479.

28. N. Chiarelli, T. R. Hartinger, V. A. Leoni, M. I. López Pujato, M. Milanič, *Improved algorithms for k-domination and total k-domination in proper interval graphs*. Proceedings of the 5th International Symposium on Combinatorial Optimization (ISCO 2018), Lecture Notes in Computer Science 10856 (2018) 290–302.

27. M. Milanič, P. Muršič, M. Mydlarz, *Induced embeddings into Hamming graphs*. In: K. G. Larsen, H. L. Bodlaender, and J.-F. Raskin, editors, 42nd International Symposium on Mathematical Foundations of Computer Science (MFCS 2017), volume 83 of Leibniz International Proceedings in Informatics (LIPIcs), pages 28:1-28:15, Dagstuhl, Germany, 2017. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

26. A. Hujdurović, E. Husić, M. Milanič, R. Rizzi, A. I. Tomescu, *The minimum conflict-free row split problem revisited*. Proceedings of the 43rd International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2017), Lecture Notes in Computer Science 10520 (2017) 303–315.

25. Z. Deniz, T. Ekim, T. R. Hartinger, M. Milanič, M. Shalom, *On three extensions of equimatchable graphs*. 14th Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW16), Electronic Notes in Discrete Mathematics 55 (2016) 177–180.

24. B. Brešar, T. Kos, T. R. Hartinger, M. Milanič, *1-perfectly orientable K_4-minor-free and outerplanar graphs*, Discrete Mathematics Days – JDMA 2016, Electronic Notes in Discrete Mathematics 54 (2016) 199–204.

23. E. Kim, M. Milanič, O. Schaudt. *Recognizing k-equistable graphs in FPT time*. Proceedings of the 41st International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2015), Lecture Notes in Computer Science 9224 (2016) 487–498.

22. A. Hujdurović, U. Kačar, M. Milanič, B. Ries, A. Tomescu, *Finding a perfect phylogeny from mixed tumor samples*, Proceedings of the 15th International Workshop on Algorithms in Bioinformatics (WABI 2015), Lecture Notes in Computer Science 9289 (2015) 80–92.

21. T. R. Hartinger, M. Johnson, M. Milanič, D. Paulusma, *The price of connectivity for cycle transversals*. Proceedings of the 40th International Symposium on Mathematical Foundations of Computer Science (MFCS 2015), Lecture Notes in Computer Science (2015) 395–406.

20. R. Chikhi, P. Medvedev, M. Milanič, S. Raskhodnikova. *On the readability of overlap digraphs*. Proceedings of the 26th Annual Symposium on Combinatorial Pattern Matching (CPM 2015), Lecture Notes in Computer Science 9133 (2015) 124–137.

19. F. Cicalese, G. Cordasco, L. Gargano, M. Milanič, J. G. Peters, U. Vaccaro, *How to go viral: cheaply and quickly*, Proceedings of the 7th International Conference 'FUN with Algorithms' (FUN 2014), Lecture Notes in Computer Science 8496 (2014) 100–112.

18. N. Chiarelli, M. Milanič, *Linear separation of connected dominating sets in graphs*, Proceedings of ISAIM 2014, International Symposium on Artificial Intelligence and Mathematics, Fort Lauderdale, FL. January 6–8, 2014. Available on the conference web page, http://www.cs.uic.edu/Isaim2014/.

17. P. Heggernes, P. van 't Hof, M. Milanič, *Induced subtrees in interval graphs*, Proceedings of the 24th International Workshop on Combinatorial Algorithms (IWOCA 2013), Lecture Notes in Computer Science 8288 (2013) 230–243.

16. N. Chiarelli, M. Milanič, *Linear separation of total dominating sets in graphs*, Proceedings of the 39th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2013), Lecture Notes in Computer Science 8165 (2013) 165–176.

15. A. Brandstädt, M. Milanič, R. Nevries, *New polynomial cases of the weighted efficient domination problem*, Proceedings of the 38th International Symposium on Mathematical Foundations of Computer Science (MFCS 2013), Lecture Notes in Computer Science 8087 (2013) 195–206.

14. F. Cicalese, G. Cordasco, L. Gargano, M. Milanič, U. Vaccaro, *Latency-bounded target set selection in social networks*, Proceedings of the 9th Conference on Computability in Europe (CiE 2013), The Nature of Computation: Logic, Algorithms, Applications, Lecture Notes in Computer Science 7921 (2013) 65–77.

13. E. Boros, P. Heggernes, P. van 't Hof, M. Milanič, *Vector connectivity in graphs*, Proceedings of the 10th annual conference on Theory and Applications of Models of Computation (TAMC 2013), Lecture Notes in Computer Science 7876 (2013) 331–342.

12. V. E. Levit, M. Milanič, D. Tankus, *On the recognition of k-equistable graphs*, Proceedings of the 38th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2012), Lecture Notes in Computer Science 7551 (2012) 286–296.

11. F. Cicalese, M. Milanič, U. Vaccaro, *Hardness, approximability, and exact algorithms for vector domination and total vector domination in graphs*, Proceedings of the 18th International Symposium on Fundamentals of Computation Theory (FCT 2011), Oslo, Norway, August 22–25, 2011. Lecture Notes in Computer Science 6914 (2011) 288–297.

10. M. Kamiński, P. Medvedev, M. Milanič, *Shortest paths between shortest paths and independent sets*, Proceedings of the 21st International Workshop on Combinatorial Algorithms (IWOCA 2010), London, UK, July 26–28, 2010. Lecture Notes in Computer Science 6460 (2011) 56–67.
9. F. Cicalese, M. Milanič, *Graphs of separability at most two: structural characterizations and their consequences*, Proceedings of the 21st International Workshop on Combinatorial Algorithms (IWOCA 2010), London, UK, July 26–28, 2010. Lecture Notes in Computer Science 6460 (2011) 291–302.
8. F. Cicalese, T. Gagie, A. Macula, M. Milanič, E. Triesch, *A better bouncer's algorithm*, Proceedings of the 5th International Conference 'FUN with Algorithms' (FUN 2010), Lecture Notes in Computer Science 6099 (2010) 113–120.
7. M. Milanič, J. Monnot, *The exact weighted independent set problem in perfect graphs and related graph classes*, V Latin-American Algorithms, Graphs and Optimization Symposium (LAGOS 09), Electronic Notes in Discrete Mathematics 35 (2009) 317–322.
6. M. Kamiński, M. Milanič, P. Medvedev, *On the plane-width of graphs*, European Conference on Combinatorics, Graph Theory and Applications (EuroComb 2009), Electronic Notes in Discrete Mathematics 34 (2009) 633–637.
5. F. Cicalese, M. Milanič, *Computing with priced information: when the value makes the price*, Proceedings of the 19th International Symposium on Algorithms and Computation, 2008, Lecture Notes in Computer Science 5369 (2008) 378–389.
4. V. E. Alekseev, V. Lozin, D. Malyshev, M. Milanič, *The maximum independent set problem in planar graphs*, Proceedings of the 33rd International Symposium on Mathematical Foundations of Computer Science, 2008, Lecture Notes in Computer Science 5162 (2008) 96–107.
3. V. V. Lozin, M. Milanič, *Tree-width and optimization in bounded degree graphs*, Proceedings of the 33rd International Workshop on Graph-Theoretic Concepts in Computer Science, Lecture Notes in Computer Science 4769 (2007) 45–54.
2. V. V. Lozin, M. Milanič, *Maximum independent sets in graphs of low degree*, Proceedings of the Eighteenth Annual ACM-SIAM Symposium on Discrete Algorithms (New Orleans, LA, 2007), 874–880, ACM, New York, 2007.
1. V. V. Lozin, M. Milanič, *A polynomial algorithm to find an independent set of maximum weight in a fork-free graph*, Proceedings of the Seventeenth Annual ACM-SIAM Symposium on Discrete Algorithms (Miami, FL, 2006), 26–30, ACM, New York, 2006.

Short Notes, Data Articles

· E., Boros, V. Gurvich, M. Krnc, M. Milanič, J. Vičič, *Dataset of Edmonds' bi-vectors and tri-vectors with realizations*, Data in Brief, to appear, 2024.

· M. Milanič, *An open problem on edge domination in graphs*, Indian Journal of Discrete Mathematics 8 (2022) 43–46.

Teaching Experience

Instructor, UP FAMNIT, University of Primorska, Koper, Slovenia

Undergraduate courses and seminars (in Slovene):

Discrete Mathematics II – Combinatorics, 2017/18, 2018/19–2023/24.

Discrete Mathematics I (Mathematical Logic and Set Theory), 2009/10–2015/16.

Algorithms in Bioinformatics, 2020/21–2023/24 (co-taught jointly with Dr. Andrej Brodnik), 2019/20 (co-taught jointly with Dr. Andrej Brodnik and Dr. Branko Kavšek), 2018/19 (co-taught jointly with Dr. Andrej Brodnik and Dr. Peter Juvan).

Bioinformatics (co-taught jointly with Dr. Andrej Brodnik, Dr. Peter Juvan and Dr. Snežna Sodin-Šemrl), 2010/11–2017/18.

Seminar – Final Project Paper, 2011/12–2014/15.

Mathematics for Students of Natural Sciences, 2009/10–2011/12.

Mathematical Modeling, 2009/10.

Optimization Methods, 2009/10.

Introductory course in Probability Theory, 2008/09.

Undergraduate courses (in English):

Algorithms in Bioinformatics, 2020/21–2023/24 (co-taught jointly with Dr. Andrej Brodnik), 2018/19 (co-taught jointly with Dr. Andrej Brodnik and Dr. Peter Juvan).

Graph Theory, 2013/14–2017/18.

Discrete Mathematics I (Mathematical Logic and Set Theory), 2012/13.

Discrete Mathematics II – Combinatorics, 2016/17–2018/19, 2022/23–2023/24.

coordinator of the course *Optimization methods*, 2014/15, 2017/18, 2020/21.

Graduate course (in Slovene):

Graph Algorithms, 2010/11, 2012/13, 2015/16–2018/19, 2020/21.

Graduate course (in English):

Graph Algorithms, 2013/14, 2014/15, 2017/18, 2019/20, 2022/23, 2023/24.

Visiting lecturer, Osaka Prefecture University, Sakai, Japan

Lectured within a graduate course *Advanced Intelligent Information Systems II*, November 2018.

A series of lectures for undergraduate students, *Selected Topics in Discrete Mathematics in English*, December 2018.

Visiting lecturer, University of Helsinki, Helsinki, Finland

Graduate course (in English):

Selected Topics in Algorithmic Graph Theory, September 2016.

Visiting lecturer, University of Maribor, Maribor, Slovenia

Doctoral course (in Slovene):

Selected Topics in Computer Mathematics, May–June 2016.

Visiting lecturer, University of Helsinki, Helsinki, Finland

Graduate course (in English):

Fragments of Structural and Algorithmic Graph Theory, September 2015.

Visiting lecturer, University of Verona, Verona, Italy

PhD course (in English):

Algorithmic Graph Theory, March 2013.

Visiting lecturer, University of Salerno, Fisciano, Italy

Graduate course (in English):

Fragments of Structural and Algorithmic Graph Theory, September 2011.

Instructor, Rutgers University, Department of Mathematics

Undergraduate course (in English):

Linear Optimization, Spring 2007.

Recitation Instructor, Rutgers University, Department of Mathematics

Undergraduate course (in English):
Calculus I, Fall 2006, Fall 2005.

Invited and Plenary Lectures at Conferences and Workshops

- *CIMPA Research School on Graph Structure and Complex Network Analysis*, Nesin Mathematics Village, Turkey, 4–16 June 2023.
- *IWDG–2021 - International Workshop on Domination in Graphs*, Indian Institute of Technology Ropar, India, 14–16 November 2021 (online).
- *International Conference on Number Theory and Discrete Mathematics (ICNTDM 2020)*, Cochin, India, 11-14 December 2020 (online).
- *Workshop on Graph Modification: algorithms, experiments and new problems*, Bergen, Norway, January 23–24, 2020,
- *70 years of DMFA Slovenije (Society of Mathematicians, Physicists and Astronomers of Slovenia)*, Bled, Slovenija, September 27–28, 2019.
- *44th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2018)*, Cottbus, Germany, June 27–29, 2018.
- *IX Latin and American Algorithms, Graphs and Optimization Symposium (LAGOS)*, CIRM, Marseille, France, September 11–15, 2017.
- *VII Latin American Workshop on Cliques in Graphs*, La Plata, Argentina, November 8–11, 2016.
- *16th Haifa Workshop on Interdisciplinary Applications of Graphs, Combinatorics and Algorithms*, University of Haifa, June 27-30, 2016.
- *Workshop on Graph Theory and its Applications — V*, İstanbul Center for Mathematical Sciences, IMBM, Boğaziçi University, South Campus, İstanbul, Turkey, November 27-28, 2015.
- Workshop on *Tractable special cases of hard combinatorial optimization problems*, Graz, Austria, December 15-16, 2014.
- Meeting of "Groupe de travail *Graphes et Optimisation* (GT-GO)", LAMSADE, Paris, France, June 13, 2014.

Talks at Research Seminars and Colloquia

- ENS de Lyon, France, 2023
- University of Haifa, Israel, 2022 (online)
- University of Maribor, Slovenia, 2022 (online)
- Virginia Commonwealth University, USA, 2022 (online)
- Princeton University, USA, 2022 (online)
- SRM Institute of Science and Technology, Ramapuram, Chennai, India, 2021 (online)
- Università degli studi di Modena e Reggio Emilia, Italy, 2021 (online)
- IBS Discrete Mathematics Group (DIMAG), Daejeon, South Korea, 2021 (online)
- University of Montpellier and CNRS, 2021 (online)
- Charles University, Prague, Czech Republic, 2020 (online)
- Université de Bordeaux, France, 2020 (online)
- National Research University Higher School of Economics, Moscow, Russia, 2019
- Universidad Nacional de General Sarmiento, Buenos Aires, Argentina, 2019
- AGH University of Science and Technology, Krakow, Poland, 2019
- LAMSADE, Université Paris-Dauphine, Paris, France, 2018
- Université Paris-Nord, Paris, France, 2018

- Mathematical Sciences Colloquium, Worcester Polytechnic Institute, Worcester, MA, USA, 2017
- National University of Rosario, Rosario, Argentina, 2016
- Hebrew University, Jerusalem, Israel, 2016
- University of Maribor, Maribor, Slovenia, 2016
- ACiD, Durham University, UK, 2015
- University of Oregon, Eugene, OR, USA, 2014
- ENS Lyon, Lyon, France, 2014
- Department of Mathematical Sciences, Worcester Polytechnic Institute, Worcester, MA, USA, 2014
- University of Verona, Verona, Italy, 2013
- RUTCOR, Rutgers University, New Brunswick, NJ, USA, 2013
- Department of Mathematics, University of the Basque Country, Bilbao, Spain, 2012
- Department of Statistical Sciences, Sapienza University, Rome, Italy, 2012
- RUTCOR, Rutgers University, New Brunswick, NJ, USA, 2012
- Department of Informatics, University of Bergen, Norway, 2012
- TU Berlin, Berlin, Germany, 2012
- University of Ljubljana, Ljubljana, Ljubljana, Slovenia, 2012
- University of Maribor, Maribor, Slovenia, 2012
- Institut für Mathematische Strukturtheorie, Graz, Austria, 2011
- University of Udine, Udine, Italy, 2010
- Mathematical Institute of the National University of Mexico (UNAM), Morelia, Mexico, 2010
- University of Ljubljana, Ljubljana, Slovenia, 2009
- University of Graz, Austria, 2008
- University of Primorska, Koper, Slovenia, 2008
- Computer Science Seminar, Université Libre Brussels, Belgium, 2008
- Mathematisches Kolloquium, Technische Universität Ilmenau, Germany, 2008
- AGGI Seminar, Technische Fakultät, Bielefeld University, Germany, 2007
- University of Primorska, Koper, Slovenia, 2006
- Seminar at LAMSADE, Université Dauphine, Paris, France, 2006
- RUTCOR, Rutgers University, New Brunswick, NJ, USA, 2005

Conference and Workshop Presentations

- SWORDS 2023, Szeged, Hungary, 2023
- GRASTA 2023, Bertinoro, Italy, 2023
- Tutorial at STWOR: Structural graph theory WORKshop, Bedlewo, Poland, 2023
- Boolean Seminar Liblice 2023, Liblice, Czech Republic, 2023
- WG 2023, Fribourg, Switzerland, 2023
- Conference 'Games, Graphs, Generation, Duality' in honour of Vladimir Gurvich 70th birthday, Laboratory of Theoretical Computer Science of the Higher School of Economics, Moscow, Russia, 2022 (online)
- GRASTA 2022, Porquerolles, France, 2022
- Topics in Algorithmic Graph Theory – Book launch workshop, Caesarea Rothschild Institute, Haifa, Israel, 2021 (online)
- MATCOS 2019, Koper, Slovenia, 2019
- GROW 2019, Vienna, Austria, 2019
- 9th Slovenian International Conference on Graph Theory, Bled, Slovenia, 2019

- Joint EURO/ALIO International Conference 2018 on Applied Combinatorial Optimization, Bologna, Italy, 2018
- Workshop on Discrete and Computational Biomathematics and Mathematical Chemistry 2017, UP FAMNIT, Koper, Slovenia
- GROW 2017, Fields Institute, Toronto, Canada, 2017
- 7th PhD Summer School in Discrete Mathematics, Rogla, Slovenia, 2017
- WG 2017, Heeze, The Netherlands, 2017
- GO X, Rigi Kaltbad, Switzerland, 2016
- GROW 2015, Aussois, France, 2015
- 2015 International Conference on Graph Theory, Koper, Slovenia, 2015
- GO IX, Sirmione, Italy, 2014
- Graph Modification Problems, Dagstuhl Seminar, Germany, 2014
- 6th GROW, Santorini Island, Greece, 2013
- IWOCA 2013, Rouen, France, 2013
- CSASC 2013, Koper, Slovenia, 2013
- Joint Workshop of Mathematics Departments of UP IAM and UP FAMNIT, Rogla, Slovenia, 2013
- Boolean Seminar Liblice 2013, Liblice, Czech Republic, 2013
- Quinto Seminario de la Red Latinoamericana Optimización Discreta y Grafos,Los Polvorines, Argentina, 2012
- 26th Ljubljana-Leoben Seminar on Graph Theory, Bovec, Slovenia, 2012
- GO VIII, Leukerbad, Switzerland, 2012
- 25th EURO, Vilnius, Lithuania, 2012
- 7th Slovenian International Conference on Graph Theory, Bled, Slovenia, 2011
- 10th Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Frascati, Italy, 2011
- Exploiting Graph Structure to cope with Hard Problems, Dagstuhl Seminar, Germany, 2011
- DIMAP Workshop on Combinatorics and Graph Theory, Warwick University, UK, 2011
- ZIF Workshop Search Methodologies II, Bielefeld, Germany, 2010
- IWOCA 2010, London, UK, 2010
- 24th EURO, Lisbon, Portugal, 2010
- LAGOS 2009, Gramado, Brazil, 2009
- Search Methodologies, Dagstuhl Seminar, Germany, 2009
- 24th Ljubljana-Leoben Seminar on Graph Theory, Montanuniversität Leoben, Austria, 2009
- Algorithmic Graph Theory 2009, University of Warwick, Coventry, UK, 2009
- DIMACS - RUTCOR Workshop on Boolean and Pseudo-Boolean Functions in Memory of Peter L. Hammer, New Brunswick, NJ, 2009
- ISAAC 2008, Gold Coast, Australia, 2008
- Workshop on Discrete Mathematics, Vienna, Austria, 2008
- 23rd Leoben-Ljubljana Seminar on Graph Theory, Ljubljana, Slovenia, 2008
- 2nd Polish Combinatorial Conference, Będlewo, Poland, 2008
- MFCS 2008, Toruń, Poland, 2008
- 2nd Workshop on Information Theory and related fields, Bielefeld University, Germany, 2008
- Workshop on Information Theory and related fields, Bielefeld University, Germany, 2007

- CanaDAM 2007, Banff, Alberta, Canada, 2007
- SODA 2007, New Orleans, LA, USA, 2007

Invited Research Visits

- *ENS Lyon*, France (host: Prof. Nicolas Trotignon), November–December 2023, 5 days.
- *Rutgers University*, New Brunswick, NJ, USA (host: Prof. Endre Boros), August–September 2023, 12 days.
- *ENS Lyon*, France (host: Prof. Nicolas Trotignon), July 2022, 6 days.
- *University of Bergen*, Norway (host: Prof. Fedor Fomin), April–May 2022, 9 days.
- *University of Verona*, Verona, Italy (host: Prof. Ferdinando Cicalese), February 2022, 11 days.
- *University of Graz*, Graz, Austria (host: dr. Andreas Darmann), December 2021, 5 days.
- *Rutgers University*, New Brunswick, NJ, USA (host: Prof. Endre Boros), September 2021, 14 days.
- *University of Graz*, Graz, Austria (host: Dr. Joachim Schauer), December 2019, 5 days.
- *Brandenburg Technical University Cottbus–Senftenberg*, Cottbus, Germany (host: Prof. Ekkehard Köhler), November 2019, 5 days.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), September 2019, 11 days.
- *National Research University Higher School of Economics*, Moscow, Russia (hosts: Prof. Vladimir Gurvich and Prof. Michael Vyalyi), August 2019, 7 days.
- *University of Liège*, Liège, Belgium (host: Prof. Yves Crama), July 2019, 5 days.
- *Universidad Nacional de General Sarmiento*, Buenos Aires, Argentina (host: Dr. Marcelo Mydlarz), June 2019, two weeks.
- *AGH University of Science and Technology*, Krakow, Poland (host: Dr. Sylwia Cichacz), May 2019, 6 days.
- *Brandenburg Technical University Cottbus–Senftenberg*, Cottbus, Germany (host: Prof. Ekkehard Köhler), October 2018, 7 days.
- *University of Graz*, Graz, Austria (host: Dr. Joachim Schauer), October 2018, 5 days.
- *Simon Fraser University*, Burnaby, BC, Kanada, USA (host: Prof. Pavol Hell), July-August 2018, 14 days.
- Invited professor, *LAMSADE* (Laboratory for Analysing and Modelling Decision-Aid Systems), University of Paris-Dauphine, Paris, France (host: prof. dr. Jérôme Monnot), July 2018, 1 month.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), April 2018, 12 days.
- *Brandenburg Technical University Cottbus–Senftenberg*, Cottbus, Germany (host: Prof. Ekkehard Köhler), June 2017, 7 days.
- *University of Buenos Aires*, Buenos Aires, Argentina (host: Assoc. Prof. Flavia Bonomo), November 2016, 5 days.
- *National University of Rosario*, Rosario, Argentina (hosts: Prof. Graciela Nasini, Prof. Gabriella Argiroffo, and Dr. Pablo Torres), October–November 2016, 2 weeks.
- *National University of La Plata*, La Plata, Argentina (hosts: Prof. Marisa Gutierrez and Prof. Liliana Alcón), October 2016, 4 days.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), October 2016, 11 days.
- Post workshop working event on Intersection and Structured Graphs, Israel (host: Prof. Martin C. Golumbic), July 2016, 5 days.
- *Boğaziçi University*, Istanbul, Turkey (host: Assist. Prof. Tınaz Ekim), June 2016, 3 days.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and

Prof. Vladimir Gurvich), April-May 2016, 9 days.

- *Boğaziçi University*, Istanbul, Turkey (host: Assist. Prof. Tınaz Ekim), November 2015, 1 week.
- *University of Helsinki*, Finland (hosts: Dr. Alexandru I. Tomescu and Prof. Veli Mäkinen), September 2015, 1 week.
- *University of Bonn*, Bonn, Germany (host: Prof. Stefan Kratsch), July 2015, 1 week.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), March-April 2015, 1 week.
- *Durham University*, Durham, UK (host: Prof. Daniel Paulusma), January 2015, 1 week.
- *University of Salerno*, Fisciano, Italy (hosts: Assoc. Prof. Ferdinando Cicalese and Prof. Ugo Vaccaro), September 2014, 1 week.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), September 2014, 9 days.
- Visiting professor at *LAMSADE* (Laboratory for Analysing and Modelling Decision-Aid Systems) at the University of Paris-Dauphine (host: Assoc. Prof. Bernard Ries), May–June 2014, 1 month.
- *ENS Lyon*, Lyon, France (host: Prof. Nicolas Trotignon), February 2014, 1 week.
- *University of Warsaw*, Warsaw, Poland (host: Assist. Prof. Marcin Kamiński), April 2013, 5 days.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), January–February 2013, 11 days.
- *University of Buenos Aires*, Buenos Aires, Argentina (host: Assoc. Prof. Flavia Bonomo), October–November 2012, 10 days.
- *University of General Sarmiento*, Los Polvorines, Argentina (hosts: Dr. Martin Safe and Dr. Luciano Grippo), October–November 2012, 10 days.
- *National University of La Plata*, La Plata, Argentina (hosts: Prof. Marisa Gutierrez and Assoc. Prof. Liliana Alcon), November 2012, 4 days.
- *University of the Basque Country*, Bilbao, Spain (host: Prof. Luis Martínez), June 2012, 1 week.
- *University of Salerno*, Fisciano, Italy (hosts: Assoc. Prof. Ferdinando Cicalese and Prof. Ugo Vaccaro), May 2012, 1 week.
- *Rutgers University*, New Brunswick, NJ, USA (hosts: Prof. Endre Boros and Prof. Vladimir Gurvich), April 2012, 2 weeks.
- *Université Libre Brussels*, Brussels, Belgium (host: Dr. Marcin Kamiński), February-March 2012, 2 weeks.
- *University of Bergen*, Bergen, Norway (host: Prof. Pinar Heggernes and Dr. Pim van 't Hof), January/February 2012, 1 week.
- *Ariel University Center of Samaria*, Ariel, Izrael (hosts: Prof. Vadim Levit and Assist. Prof. David Tankus), November 2011, 1 week.
- *University of Salerno*, Fisciano, Italy (hosts: Assoc. Prof. Ferdinando Cicalese and Prof. Ugo Vaccaro), September 2011, 10 days.
- *Université Libre Brussels*, Brussels, Belgium (host: Dr. Marcin Kamiński), February 2011, 3 days.
- *University of Salerno*, Fisciano, Italy (hosts: Assoc. Prof. Ferdinando Cicalese and Prof. Ugo Vaccaro), June 2010, 3 days.
- *University of Salerno*, Fisciano, Italy (hosts: Assoc. Prof. Ferdinando Cicalese and Prof. Ugo Vaccaro), February 2010, 1 week.
- *Université Libre Brussels*, Brussels, Belgium (host: Dr. Marcin Kamiński), November 2009, 3 days.
- *University of Salerno*, Fisciano, Italy (host: Assoc. Prof. Ferdinando Cicalese), July 2009,

1 week.

- *University of Salerno*, Fisciano, Italy (host: Assoc. Prof. Ferdinando Cicalese), May 2008, 3 weeks.
- *University of Salerno*, Fisciano, Italy (host: Assoc. Prof. Ferdinando Cicalese), August 2007, 1 week.
- Visiting researcher at *LAMSADE* (Laboratory for Analysing and Modelling Decision-Aid Systems) at the University of Paris-Dauphine, Paris, France, May–June 2006, supported by DIMACS.

Postdoc and Student Supervision

Postdoc supervision

- Pascal Gollin (upcoming, from September 2024), FAMNIT, University of Primorska.
- Claire Hilaire (October 2023–ongoing), FAMNIT, University of Primorska.
- Clément Dallard (October 2019–August 2022), FAMNIT, University of Primorska.

PhD student supervision

- Nevena Pivač, October 2017 – July 2024, FAMNIT, University of Primorska, thesis title: *Structure and algorithms for graph classes: new results on minimal separators and independent sets*
- Kenny Štorgel (co-supervision; main supervisor: Dr. Borut Lužar), October 2019–September 2023, FAMNIT, University of Primorska. Thesis title: *Certain Graph-Theoretic Invariants and Decompositions: From Structure to Bounds and Algorithms*
- Tatiana Romina Hartinger, February 2014–July 2017, FAMNIT, University of Primorska. Thesis title: *New Characterizations in Structural Graph Theory:* 1*-Perfectly Orientable Graphs, Graph Products, and the Price of Connectivity*
- Nina Chiarelli, October 2011–May 2016, FAMNIT, University of Primorska. Thesis title: *New concepts and results in domination and matching theory in graphs*

MS thesis supervision

- Supervised 7 MSc theses (2nd Bologna degree) at the *Mathematical Sciences* program, FAMNIT, University of Primorska:
  - Mirza Redžić, *Classes of graphs with tree-independence number at most two*, 2022.
  - Mirza Krbezlija, *A Complexity Study of Distance Variants of Covering and Domination Problems in H-Free Graphs*, 2021.
  - Narmina Baghirova, *Reconstructing perfect phylogenies via branchings in acyclic digraphs: a new lower bound and efficiently solvable cases*, 2020.
  - Kenny Štorgel, *The Math Pattern Recognition Method and Application Examples in Graph Theory*, 2019.
  - Edin Husić, *The Maximum Independent Set Problem and Equistable Graphs* (co-supervisor: Assist. Prof. Ademir Hujdurović, PhD), 2017.
  - Nevena Mitrović, *The University Timetabling Problem – Complexity and an Integer Linear Programming Formulation: a Case Study of UP FAMNIT* (co-supervisor: Assist. Prof. Jernej Vičič, PhD), 2017.
  - Angelina Ćirković, *The Chromatic Number and the Chromatic Index of a Graph*, 2017.

MS thesis co-supervision

- Co-supervised 1 MSc thesis (2nd Bologna degree) at the *Mathematical Sciences* program, UP FAMNIT, University of Primorska:
  - Peter Muršič, 2012, *Graph Partitioning, Community Detection and Max Cut* (supervisor: Prof. Dragan Stevanović).

BS final projects supervision

- Supervised 13 final projects at the undegraduate Mathematics program at FAMNIT, University of Primorska:
  - Anja Hofbauer, 2022, *Threshold graphs* (co-supervisor: Dr. Nina Chiarelli),
  - Mojca Šentjurc, 2019, *1-Perfectly Orientable Product Graphs*,
  - Arbër Avdullahu, 2019, *Representations of graphs as induced subgraphs of Hamming graphs* (co-supervisor: Dr. Marcelo Mydlarz),
  - Mirza Krbezlija, 2018, *Approximation aspects of vector domination and vector connectivity in graphs*,
  - Tilen Sabadin, 2017, *Kuratowski's Theorem*,
  - Kenny Štorgel, 2017, *The Erdős-Faber-Lovász conjecture*,
  - Vladan Jovičić, 2016, *Readability of digraphs and bipartite graphs* (co-supervisor: Prof. Dr. Andrej Brodnik), the student got a University Award for the final project paper,
  - Edin Husić, 2015, *Sumbodular functions*,
  - Maja Frangež, 2013, *Odd dominating sets in graphs*,
  - Olga Kaliada, 2012, *Three classical Greek problems* (co-supervisor: Dr. Marjan Jerman),
  - Urška Pangerc, 2012, *Characterizations of perfect graphs*,
  - Matej Čeč, 2010, *Connectivity in graphs*,
  - Marko Tuta, 2010, *Duality theorems in the language of hypergraphs*.
- Supervised 1 final project at the undegraduate Bioinformatics program at UP FAMNIT, University of Primorska:
  - Urša Kačar, 2015, *Perfect phylogeny problems*.

LEADERSHIP OF RESEARCH PROJECTS

Financed or co-financed by the Slovenian Research and Innovation Agency:

- June 2024–May 2027: ARIS project N1-0371, "Beyond Sparsity: Graph Classes and Width Parameters", **150,000 EUR**.
- July 2024–June 2026: Research Cooperation between Slovenia and USA: Selected topics on graphs, hypergraphs, and Boolean functions. Project leaders: Prof. Martin Milanč and Prof. Endre Boros.
- October 2022–September 2025: ARRS project J1-4008, "Tree-Independence Number of Graphs", **300,000 EUR**.
- 2023–2024: Research Cooperation between Slovenia and Austria: Bulk-robust optimization on graphs, Project leaders: Prof. Martin Milanč and Dr. Stefan Lendl.
- July 2022–June 2024: Research Cooperation between Slovenia and USA: Studies in duality: graphs on surfaces and conformal hypergraphs. Project leaders: Prof. Martin Milanč and Prof. Endre Boros.
- May 2019–April 2023: ARRS project N1-0102, "Topics in Structural Graph Theory: Invariants, Separators, and Intersection Representations", **225,000 EUR**.
- 2020–2022: Research Cooperation between Slovenia and Austria: Fair division under conflict constraints, Project leaders: Prof. Martin Milanč and Assoc. Prof. Dr. Andreas Darmann.
- 2019–2020: Research Cooperation between Slovenia and Russia: Topics in graphs, hypergraphs, and positional games. Project leaders: Assoc. Prof. Martin Milanč and Prof. Vladimir Gurvich.
- 2019–2020: Research Cooperation between Slovenia and Germany: Graph searching, graph classes, and generalizations of chordality. Project leaders: Assoc. Prof. Martin Milanč and Prof. Ekkehard Köhler.

- 2018–2019: Research Cooperation between Slovenia and Austria: Cliques and spanning trees under budget constraints. Project leaders: Assoc. Prof. Martin Milanč and Dr. Joachim Schauer.
- 2018–2019: Research Cooperation between Slovenia and USA: Studies in graph representations: dual graphs on surfaces, Cartesian dimension, and readability of graphs. Project leaders: Assoc. Prof. Martin Milanč and Prof. Endre Boros.
- April 2017–March 2019: Research Cooperation between Slovenia and Germany: Graph structures and efficient algorithms for optimization problems. Project leaders: Assoc. Prof. Martin Milanč and Prof. Ekkehard Köhler.
- 2016–2018: ARRS project J1-7051, "Independence and domination in structured graph classes", **150,000 EUR**.
- 2016–2017: Research Cooperation between Slovenia and USA: Some combinatorial problems: graphs, hypergraphs, and positional games. Project leaders: Assoc. Prof. Martin Milanč and Prof. Endre Boros.
- 2015–2017: Research Cooperation between Slovenia and Argentina: Packing and Covering Problems in Graphs and Hypergraphs. Project leaders: Assoc. Prof. Martin Milanč and Prof. Graciela Nasini.
- 2015–2016: Research Cooperation between Slovenia and France: Structural and Algorithmic Aspects of Graph Classes Defined by Cliques and Stable Sets. Project leaders: Assoc. Prof. Martin Milanč and Assoc. Prof. Bernard Ries / Prof. Christophe Picouleau.
- 2014–2016: Research Cooperation between Slovenia and Turkey: New Trends in Matching Theory, Project leaders: Assoc. Prof. Martin Milanč and Assist. Prof. Tınaz Ekim Aşici.
- 2014–2015: Research Cooperation between Slovenia and USA: Cliques, Stable Sets, and Graph Classes. Project leaders: Assoc. Prof. Martin Milanč and Prof. Endre Boros.
- 2012–2013: Research Cooperation between Slovenia and USA: Numerical Characterizations of Graph Properties. Project leaders: Assist. Prof. Martin Milanč and Prof. Endre Boros.
- 2012: Research Cooperation between Slovenia and Spain: Mathematical modelling of vaccine design.
- 2012: Research Cooperation between Slovenia and Switzerland: Graph polynomials.
- 2011: Research Cooperation between Slovenia and Mexico: Moore graphs and cages.
- 2011: Research Cooperation between Slovenia and Israel: Cliques, independent sets, and graph classes.
- 2010: Research Cooperation between Slovenia and Mexico: Moore graphs.

Membership in National and International Research Programs and Projects

- January 2025 – December 2027: COVER – (C)ombinatorial (O)ptimisation for (V)ersatile Applications to (E)merging u(R)ban problems, Marie Skłodowska-Curie Action MSCA-SE funded by the European Commission, Lead Partner: Gebze Technical University, Turkey.
- January 2009 – December 2027: Research Program of the Slovenian Research and Innovation Agency P1-0285 "Algebra, discrete mathematics, probability and game theory"; Program leader: Prof. Dragan Marušič.
- October 2022–September 2026: CogniCom (0013103), Research program of the University of Primorska Rector's fund. Project leader: Prof. Marko Tkalčič.
- October 2022–September 2025: J1-4084 "Discrete combinatorial objects in the spectral domain - intersection analysis", project at the Slovenian Research and Innovation Agency. Project leader: Prof. Enes Pasalic.
- May 2023–April 2025: Research Cooperation between Slovenia and UK: On the non-existence of extremal graphs. Project leaders: Dr. Slobodan Filipovski and Dr. James

Tuite.

- July 2022–June 2024: Research Cooperation between Slovenia and USA: New bounds in extremal graph theory. Project leaders: Dr. Slobodan Filipovski and Dr. Vaidyanathan Sivaraman.
- July 2022–June 2024: Research Cooperation between Slovenia and USA: Some problems in hypergraphs, graphs and games. Project leaders: Dr. Matjaž Krnc and Prof. Vladimir Gurvich.
- 2021–2024: J1-3003 "Groups, posets, and complexes", project at the Slovenian Research Agency. Project leader: Prof. Russell Stephen Woodroofe.
- 2021–2024: J1-3002 "Matchings and edge colorings in cubic graphs", project at the Slovenian Research Agency. Project leader: Prof. Riste Škrekovski.
- 2021–2024: J1-3001 "Terwilliger algebra of a graph", project at the Slovenian Research Agency. Project leader: Prof. Štefko Miklavič.
- 2022–2023: Research Cooperation between Slovenia and France: "Width parameters and graph coloring". Project leaders: Prof. Riste Škrekovski and Prof. Nicolas Trotignon.
- 2020–2023: N1-0160 "Topological and Algebraic Combinatorics", project at the Slovenian Research Agency. Project leader: Prof. Russell Stephen Woodroofe.
- 2018–2021: J1-9110 "Traversability in vertex-transitive graphs", project at the Slovenian Research Agency. Project leader: Prof. Klavdija Kutnar.
- 2015–2020: Research Program of the Slovenian Research Agency I0-0035 "Infrastrukturna skupina Univerze na Primorskem". Program leader: Prof. Gorazd Drevenšek.
- 2015–2018: N1-0032 "Graphs, groups, configurations, and geometries", project at the Slovenian Research Agency. Project leader: Prof. Tomaž Pisanski.
- 2014–2017: J1-6720 "Algebraic graph theory with applications", project at the Slovenian Research Agency. Project leader: Prof. Dragan Marušič.
- 2014–2017: J1-6743 "Computational tools development for modeling of pharmaceutically interesting molecules", project at the Slovenian Research Agency. Project leader: Prof. Dušanka Janežič.
- 2013–2016: J1-5433 "Applications of semiregular group actions to some open problems in algebraic graph theory", project at the Slovenian Research Agency. Project leader: Prof. Dragan Marušič.
- 2012–2014: "Width parameters and graph powers": Research Cooperation between the Republic of Slovenia and Argentina. Project leaders: Prof. Štefko Miklavič and Prof. Marisa Gutierrez.
- 2011–2014: J1-4021 "Algebraic Graph Theory and Applications", project at the Slovenian Research Agency. Project leader: Prof. Dragan Marušič.
- 2011–2014: J1-4010 "Bipartite distance-regular graphs", project at the Slovenian Research Agency. Project leader: Prof. Štefko Miklavič.
- 2011–2014: N1-0011 "GReGAS – Geometric representations and symmetries of graphs, maps and other discrete structures and applications in science", project at Slovenian Research Agency, Supported in part by the European Science Foundation. Project leader: Prof. Tomaž Pisanski.
- 2011–2012: "Algebraic techniques for three problems in graph theory": Research Cooperation between the Republic of Slovenia and the Flemish Region. Project leaders: Prof. Štefko Miklavič and Prof. Philippe Cara.
- 2010–2011: BI-Bosna/10-11/3 - Scientific Research Cooperation between the Republic of Slovenia and Bosnia and Herzegovina - "Mathematical applications as supportive tool towards integrative biodiversity conservation in north-eastern Bosnia". Project leaders: Prof. Dragan Marušič and Prof. Fehim Dedagić.
- 2007–2009: member of the junior research group "Combinatorial Search Algorithms in

Bioinformatics" at Bielefeld University, funded by the Sofja Kovalevskaja Award 2004 of the Alexander von Humboldt Foundation and the Bundesministerium für Bildung und Forschung. Project leader: Assoc. Prof. Ferdinando Cicalese.

OTHER PROFESSIONAL ACTIVITIES

Editorial activities

- Ars Mathematica Contemporanea, editor, since 2019.
- Discrete Applied Mathematics, editor, since 2018.
- The Art of Discrete and Applied Mathematics, editor, since 2018.
- Guest editor of a special issue of Discrete Applied Mathematics following GROW 2022.
- Guest editor of a special issue of AMC Transactions on Algorithms following ACM-SIAM Symposium on Discrete Algorithms (SODA22).
- Guest editor of a special issue of Discrete Applied Mathematics, *Algorithmic Graph Theory on the Adriatic Coast*, 2015–2017.
- Guest editor of a special issue of Discrete Applied Mathematics, *GO IX: Graphs and Optimization*, 2014–2017.

Conference and conference session organization

- PC chair of WG '24, June 2024, Slovenia.
- PC member of IWOCA '24, July 2024, Ischia, Italy.
- Organizer of the *Algorithmic Graph Theory* minisymposium within the *10th Slovenian Conference on Graph Theory*, June 2023, Kranjska Gora, Slovenia.
- Co-chair of GROW '22, September 2022, Koper, Slovenia.
- PC member of WG '22, June 2022, Tübingen, Germany.
- PC member of SODA '22, January 2022, Alexandria, VA, USA.
- PC member of WG '21, June 2021, Warsaw, Poland.
- Co-organizer of the *Algorithmic Graph Theory* minisymposium within the *8th European Congress of Mathematics*, June 2021, Portorož, Slovenia.
- Member of the Organizing Committee of the *8th European Congress of Mathematics*, June 2021, Portorož, Slovenia.
- PC member of LAGOS '21, May 2021, São Paulo, Brazil.
- PC member of MFCS '19, August 2019, Germany.
- PC member of LAGOS '19, June 2019, Brazil.
- PC member of IWOCA '18, July 2018, Singapore.
- Member of the Scientific Committee of *Hypergraphs, Graphs and Designs – HyGraDe 2017*, June 2017, Sant'Allesio, Italy.
- PC member of IWOCA '16, August 2016, Helsinki, Finland.
- PC member of AAIM '16, July 2016, Bergamo, Italy.
- PC member of WG '16, June 2016, Istanbul, Turkey.
- PC member of IWOCA '15, October 2015, Verona, Italy.
- Member of the Scientific Committee and chair of the Organizing Committee of *Algorithmic Graph Theory on the Adriatic Coast*, June 2015, Koper, Slovenia.
- PC member of EUROCG '15, March 2015, Ljubljana, Slovenia.
- Co-organized an Invited Paper Session at *MAA MathFest* 2014, August 2014, Portland, OR, USA.
- Head of the Organizing Committee of the *28th Ljubljana – Leoben Graph Theory Seminar*, September 2014, Koper, Slovenia.
- Local organizer of an international workshop *Combinatorial Algorithms in Bioinformatics*, September 2012, Koper, Slovenia.
- Organized an invited session *Boolean Optimization in Graph Theory* within the Boolean

Programming Stream, EURO XXV conference, July 2012, Vilnius, Lithuania.

- Member of the Organizing Committee of the Algebraic Graph Theory Summer School 2011, July 2011, Rogla, Slovenia.
- Organized an invited session *Boolean Optimization in Graph Theory* within the Boolean Programming Stream, EURO XXIV conference, July 2010, Lisbon, Portugal.

Reviewer

- *Journals (selection):* ACM Transactions on Algorithms, Algorithmica, Annals of Operations Research, Ars Combinatoria, Ars Mathematica Contemporanea, The Australasian Journal of Combinatorics, Central European Journal for Operational Research, Computational and Applied Mathematics, Discrete Applied Mathematics, Discrete Mathematics, Discussiones Mathematicae Graph Theory, The Electronic Journal of Combinatorics, European Journal of Combinatorics, European Journal of Operational Research, Graphs and Combinatorics, IEEE Transactions on Computational Biology and Bioinformatics, Information Processing Letters, Journal of Combinatorial Theory Series B, Journal of Graph Algorithms and Applications, Journal of Graph Theory, Journal of Discrete Algorithms, Journal of the Operational Research Society, RAIRO Operations Research, SIAM Journal on Discrete Mathematics, SIAM Journal on Computing, Theoretical Computer Science, Theory of Computing Systems.
- *Conferences:* MFCS 2024, FCT 2023, ESA 2023, ICALP 2023, ICS 2022, IWOCA 2021, STACS 2020, STACS 2019, WG 2018, MFCS 2018, ICALP 2018, EUROCOMB 2017, WG 2017, SWAT 2016, CALDAM 2015, FCTTCS 2014, WG 2014, ICALP 2014, LATIN 2014, FCT 2013, IWOCA 2013, WG 2013, LAGOS 2013, FCTTCS 2012, ESA 2012, FUN 2012, ISCO 2012, LATIN 2012, COCOA 2010, EuroCG 2009, LATIN 2008, WABI 2008, RECOMB 2008.
- Reviewer for zbMATH, since 2017.
- Reviewer for Mathematical Reviews, since 2019.
- Reviwer for MATH AmSud, 2019.
- Reviewer for Czech Science Foundation, 2018.
- Reviewer for a Banff International Research Station (BIRS) workshop proposal, 2014.

Membership in PhD committees

- Member of the PhD committee for Elia Carlo Zirondelli, University of Trento, Italy, February 2022.
- Member of the PhD committee for Dragana Božović, University of Maribor, Slovenia, October 2020.
- Member of the PhD committee for Mehdi Khosravian Ghadikolaei, University Paris-Dauphine, France, July 2019.
- Member of the PhD committee for Valerio Boncompagni, University of Leeds, United Kingdom, November 2018.
- Member of the PhD committee for Erica Hinrichsen, National University of Rosario, Argentina, November 2016.
- Member of the PhD committee for Samuel S. Wilson, University of Leeds, United Kingdom, July 2015.
- Member of the PhD committee for Michel Mizrahi, University of Buenos Aires, Buenos Aires, Argentina, November 2014.
- Member of the PhD committee for Rok Požar at the Faculty of Computer Science and Informatics, University of Ljubljana, Ljubljana, Slovenia, September 2013.
- Member of the PhD committee for Polona Pavlič at the Faculty of Natural Sciences and Mathematics, University of Maribor, Maribor, Slovenia, March 2013.
- Member of the PhD committee for Julia Zakotnik at the Faculty of Technology, Bielefeld

University, Bielefeld, Germany, August 2008.

Outreach activities

- 2011 – 2023: Member of the organizing committee of a series of math summer camps *Mathematics is Cool* for pupils of ages 13-18, FAMNIT, University of Primorska.
- 2009 – 2019: Coordinator of a monthly series of lectures about mathematics, *"FAMNIT Excursions into the Mathematical Universe"* (Famnitovi Izleti v matematično vesolje), FAMNIT, University of Primorska.

Patent applications

- L. Legarreta Solaguren, L. Martínez Fernandez, I. Martínez de la Fuente Martínez, M. Milanič, *Method for designing a vaccine*: EP 3 081 229 A1: applic. no.: 14830810.9, WO 2015/082745. [München]: European Patent Office, 2016. 19 pp.
- L. Legarreta Solaguren, L. Martínez Fernandez, I. Martínez de la Fuente Martínez, M. Milanič, *Procedimento para diseñar una vacuna*: P201331759: fecha de recepción 02 diciembre 2013. Madrid: Oficina Española de Patentes y Marcas, 2014. 15 pp.

PARTICIPATION AT CONFERENCES, WORKSHOPS, AND SUMMER SCHOOLS (NO TALK GIVEN)

- Second edition of the *Structural Graph Theory Workshop (STWOR2)*, Chęciny, Poland, July 2024.
- *LogAlg 2023 - 2nd Workshop on Logic, Graphs, and Algorithms*, Warsaw, Poland, November 2023.
- *Structural Graph Theory Workshop (STWOR)*, Będlewo, Poland, September 2023.
- *10th Slovenian Conference on Graph Theory*, Kranjska Gora, Slovenia, June 2023.
- *BIRS workshop – Extremal Graphs arising from Designs and Configurations*, Banff, Canada, May 2023.
- *Brno-Koper Graph Theory Workshop*, Gozd Martuljek, Slovenia, April 2023.
- *LoGAlg2022: Workshop on Logic, Graphs, and Algorithms*, LIRMM, Montpellier, France, November 2022.
- *Graph Decompositions: Small Width, Big Challenges*, Lorentz Center, Leiden, The Netherlands, October 2022.
- *MATCOS 2022*, Koper, Slovenia, October 2022.
- 9*th PhD Summer School in Discrete Mathematics*, Rogla, Slovenia, July 2019.
- *Software Tools for Mathematics*, Koper, Slovenia, September 2018.
- *ECCO XXX - Joint EURO/ORSC/ECCO Conference* 2017 *on Combinatorial Optimization*, Koper, Slovenia, May 2017.
- *WG* 2016 *(42nd International Workshop on Graph-Theoretic Concepts in Computer Science)*, Istanbul, Turkey, June 2016.
- *IWOCA* 2015 *(26th International Workshop on Combinatorial Algorithms)*, Verona, Italy, October 2015.
- *Enumeration Algorithms Using Structure*, Lorentz Center, Leiden, Netherlands, August 2015.
- 8*th Slovenian Conference on Graph Theory*, Kranjska Gora, Slovenia, June 2015.
- *Encompassing Computer Science Workshop* 2015, Koper, Slovenia, May 2015.
- *International Workshop on Graph Decomposition*, CIRM, Luminy, Marseilles, France, January 2015.
- *MAA MathFest* 2014, Portland, OR, USA, August 2014.
- *Symmetries of Graphs and Networks IV*, Rogla, Slovenia, June 2014.
- *Erdős Centennial*, Budapest, Hungary, July 2013.
- *ICTP-IPM Workshop and Conference in Combinatorics and Graph Theory*, ICTP, Trieste, Italy, September 2012.

- *Computers in Scientific Discovery 6*, Portorož, Slovenia, August 2012.
- *Symmetries of Graphs and Networks III*, Rogla, Slovenia, June 2012.
- *Algebraic Graph Theory Summer School*, Rogla, Slovenia, June 2011.
- 2*nd International Workshop on Symmetries of Graphs and Networks*, Rogla, Slovenia, August 2010.
- *Fifth International Conference on Fun With Algorithms*, Ischia, Italy, June 2010.
- *First Montreal Spring School in Graph Theory*, McGill University, Montreal, Canada, May 2010.
- Didactic seminar *Algorithms and Pretty Theorems*, Paris, France, February 2010.
- European Conference on Combinatorics, Graph Theory and Applications (EuroComb 2009), University of Bordeaux 1, Bordeaux, France, September 2009.
- *International School on Mathematics "Guido Stampacchia": Graph Theory, Algorithms and Applications*, Erice, Italy, September 2008.
- *Workshop on Graph Decomposition: Theoretical, Algorithmic and Logical Aspects*, CIRM, Luminy, Marseille, France, April 2008.
- *ADONET-CIRM School on Graphs and Algorithms*, Levico Terme, Trento, Italy, October 2007.
- *EXCILL: Extremal Combinatorics at Illinois*, Department of Mathematics, University of Illinois at Urbana-Champaign, November 2006.
- Summer school *Combinatorial Optimization: Methods and Applications*, Séminaire de Mathématiques Supérieures / NATO Advanced Study Institute, Université de Montréal, Canada, June 2006.